

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Assignee: Arcaris, Inc.

Inventors: Carl Alexander Kamb

Application No: 09/378,420

Filed: August 20, 1999

For: METHODS FOR IDENTIFYING,  
CHARACTERIZING AND EVOLVING  
CELL-TYPE SPECIFIC CIS-  
REGULATORY ELEMENTS

Group Art Unit: 1642  
Examiner: Rawlings, Stephen

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SECOND PRELIMINARY AMENDMENT

Sir:

This is a preliminary amendment to **Application No. 09/378,420**.

On December 29, 2000, the Examiner issued an Office Action requiring restriction pursuant to 35 U.S.C. §121, and withdrawing claims 29, 30, 37 and 38. Applicant believes that inadvertent typographical errors in those claims formed the basis for the Examiner's withdrawal of those claims. Accordingly, Applicant now amends claims 29, 30, 37 and 38, and respectfully requests that the Examiner enter the claims for further examination.

IN THE CLAIMS:

Please **AMEND** claims 29, 30, 37 and 38 as indicated:

26. (Reiterated; Amended) A method for characterizing one or more protein factors that bind to an identified cell[-type] specific cis regulatory element, comprising the steps of:

(a) preparing an extract containing the factors;

- (b) incubating the extract with the identified cell-type specific cis regulatory element under conditions in which the factors specifically bind to the cis regulatory element; and
- (c) substantially purifying the specifically bound factors.

29. (Amended) The method of claim 26 [28] wherein said cell-specific cis-regulatory element is cell-type specific.

30. (Amended) The method of claim 26 [28] wherein said cell-specific cis-regulatory element is cell-state specific.

31. (Reiterated) The method of claim 26 wherein said cell specific cis regulatory element is identified by comparing at lease two developmentally-related cell types.

32. (Reiterated) The method of claim 31, wherein said developmentally related cell types are selected from the group consisting of: breast cancer cells vs. normal mammary epithelial cells, lung cancer cells vs. normal lung epithelial cells, colon cancer cells vs. normal colon epithelial celss, ovarian cancer cells vs. normal ovarian cells, melanoma cells vs. normal melanocytes, leukemia cells vs. normal leukocytes, prostate cancer cells vs. normal prostate cells, and metastatic solid tumor vs. non-metastatic solid tumor cells.

33. (Reiterated) The method of claim 26 wherein said cis-regulatory element is active in a mammalian cell.

34. (Reiterated) The method of claim 33 wherein said mammalian cell is a cancer cell.

35. (Reiterated) The method of claim 26 wherein said cis-regulatory element is active in a plant cell.

36. (Reiterated) The method of claim 26 wherein said cis-regulatory element is active in a microbial cell.

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37. (Amended) The method of claim 26 wherein said cis-regulatory element [agent] is selected on the basis of responsiveness to a pre-selected agent.

38. (Amended) The method of claim 37 [26] wherein said preselected agent is selected from the group consisting of retinoic acid, estrogen, insulin, progesterone, growth factors, cytokines and nutrients.

39. (Reiterated) The method of claim 26 wherein said extract is prepared from a host cell type of interest, said host cell type characterized by the endogenous activity or inactivity of said cis-regulatory element.

40. (Reiterated) The method of claim 39, wherein said factor is responsible for activation of expression in said host cell type.

41. (Reiterated) The method of claim 39, wherein said factor is responsible for repression of expression in said cell type.

#### **REMARKS**

The amendments in claims 29, 30, 37 and 38 correct typographical errors and establish the desired antecedent basis. No new matter is added thereby. Applicant requests that the Examiner enter and consider favorably the claims as amended and submitted herein.

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Respectfully submitted,

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